

012604

PTO/SB/05 (11-00)

Please type a plus sign (+) inside this box ☐Approved for use through 10/31/2002. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

TI-36945

First Inventor

Muhammad Zubair Ikram

Title

A Hybrid IMMSE-LMMSE Receiver Processing Technique And  
Apparatus For A MIMO WLAN

Express Mail Label No.

ER640661564US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO:

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 202311. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.3. ☒ Specification [ Total Pages **14** ]

- Descriptive title of the invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to sequence listing, a table, or a computer program listing appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

4. ☒ Drawing(s) (35 U.S.C. 113) [ Total Sheets **1** ]5. Oath or Declaration [ Total Pages **1** ]

- a. ☒ Newly Executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)

i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).

6. ☐ Application Data Sheet. See 37 CFR 1.767. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)

- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**9. ☒ Assignment Papers (cover sheet & documents(s))10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney11. ☐ English Translation Document (if applicable)12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations13. ☐ Preliminary Amendment14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)16. ☐ Request and Certification under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation☐ Divisional☐ Continuation-in-part (CIP)

of prior application No: \_\_\_\_\_ / \_\_\_\_\_

Prior application information:

Examiner \_\_\_\_\_

Group / Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

Customer Number or Bar Code Label

23494

(Insert Customer No. or Attach bar code label here)



Correspondence address below

NAME

Texas Instruments Incorporated

ADDRESS

CITY

STATE

TX

ZIP CODE

COUNTRY

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(972) 917-4418

Name (Print/Type)

Dwight N. Holmbo

Registration No. (Attorney/Agent)

Reg. No. 36,410

Signature

Dwight N. Holmbo

Date

1/26/04

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

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## FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision

### Complete If Known

Application Number	TBD
Filing Date	January 26, 2004
First Named Inventor	Muhammad Zubair Ikram
Examiner Name	TBD
Group Art Unit	TBD
Attorney Docket No.	TI-36945

TOTAL AMOUNT OF PAYMENT (\$ **810.00**)

### METHOD OF PAYMENT (check all that apply)

1. ☒ The Commissioner is hereby authorized to charge to the following Deposit Account,

Deposit Account Number

20-0668

Deposit Account Name

Texas Instruments Incorporated

☒ Charge any additional fee required or credit any overpayment ☐ Charge all indicated fees and any additional fee required or credit any overpayment

2. ☐ **Payment Enclosed:**

☐ Check ☐ Money Order ☐ Other

### FEE CALCULATION

#### 1. BASIC FILING FEE

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	\$770
1002	340	2002	170	Design filing fee	\$
1003	530	2003	265	Plant filing fee	\$
1004	770	2004	385	Reissue filing fee	\$
1005	160	2005	80	Provisional filing fee	\$

SUBTOTAL (1) (\$ **770.00**)

#### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims <b>11</b> -20**=	<b>0</b>	<b>18</b>	<b>0</b>
Independent Claims <b>2</b> -3**=	<b>0</b>	<b>86</b>	<b>0</b>
Multiple Dependent		<b>290</b>	<b>0</b>

\*\*or number previously paid, if greater; For Reissue, see below

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent Claims in excess of 3
1203	280	2203	140	Multiple dependent claims in excess of 3
1204	86	2204	43	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ **0.00**)

### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

Large Fee Code	Entity Fee (\$)	Small Fee Code	Entity Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension of time within second month	
1253	950	2253	475	Extension of time within third month	
1254	1,480	2254	740	Extension of time within fourth month	
1255	2,010	2255	1,005	Extension of time within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee for provisional applications	
1806	180	1806	180	Submission of Information Disclosure Stmt.	
8021	40	8021	40	Recording each patent assignment per property (time number of properties)	\$40
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	

Other fee (specify) \_\_\_\_\_

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) **\$40**

#### SUBMITTED BY

Typed or Printed Name

Dwight N. Holmbo

Signature

*Dwight N. Holmbo*

Date

1/26/2004

#### Complete (if applicable)

Reg. Number

36,410

Deposit Account User ID

N/A